



The Role of Data and Standards in our Modernization and Transformation Journey

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Digitization – the fourth industrial revolution



1st revolution

18th century



Water/steam

2nd revolution

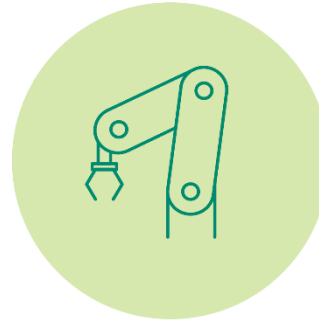
19th century



Electrification

3rd revolution

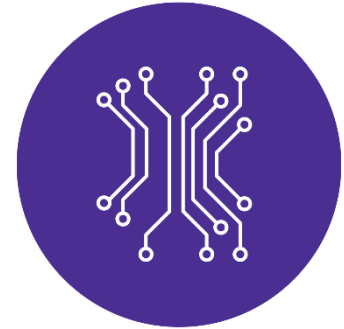
20th century



Automation

4th revolution

21st century



Digitization

IT&S

Source: BP Technology Review, 2018



Digitization – will have a significant impact on world energy systems



key points that emerge from the BP Technology Outlook?

Meeting the Paris goals is technically feasible and economically feasible but would require profound change

Wind and solar power are set to grow rapidly and become a major source of electricity world-wide by 2050

3 There are significant integration costs when a high proportion of grid demand is provided by wind and solar power

4 Energy storage options are developing rapidly

5 Transport is set to see transformative change, led by electric vehicles

6 Much of the world's heating is projected to continue to be provided by gas-fired appliances although action to reduce carbon emissions could favour electric systems and hybrid appliances using heat pumps with gas

7 Decarbonized gas technologies are important to resolving the dual challenge of reducing greenhouse gas emissions while meeting growing demand for energy

8 Gas and oil are set to play a continuing role

9 Digital technology is the most significant source of system-wide efficiency improvement, although its full power is unknowable

10 Energy efficiency offers massive potential to reduce emissions and save energy

Source BP Technology Outlook

We estimate that application of digital tools, including sensors, supercomputing, data analytics, automation and artificial intelligence (AI), all supported by the networked computers of the 'cloud', could reduce primary energy demand and costs in sectors of the energy system by 20-30% by 2050.

BP strategy – platform for growth



Shift to gas and advantaged oil in the upstream



Market-led growth in the downstream



Venturing and low carbon across multiple fronts



Modernizing the whole group





Our Purpose

We solve big complex challenges with our data and technology expertise to advance the energy transition

Source: BP IT&S
IT&S



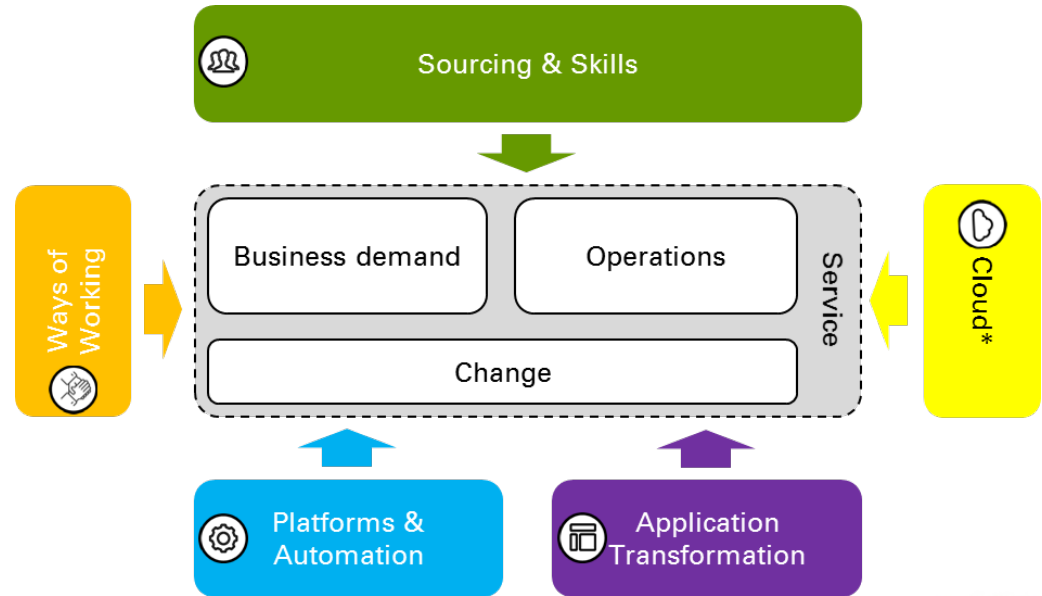
Themes to deliver Information and Technology at Pace



The Modernise IT programme has been established to drive changes with work structured against 4 levers:

1. **Sourcing and skills** - Transforming from a facilitating to a doing IT organisation by getting the balance right between BP staff and external vendors and building the digital capabilities to support this
2. **New ways of working** - empowering our people by combining build, run and change activities and by adopting agile and DevOps practices to work faster and more flexibly
3. **Platforms & Automation** - Defining the core platforms for IT&S, equipping the organisation to transition to operate these whilst identifying opportunities for automation to reduce costs, improve effectiveness and modernize our offering
4. **Application transformation** - Removing complexity and cost through a simplified application landscape, identifying and delivering changes to applications to work best in a cloud environment.

These changes are in addition to the **Cloud Transformation** (+1)



Role of standards



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IT&S



PIDX Standards help drive
eBusiness adoption,
integration cost reduction,
and improve overall Business
Processes Efficiencies.

Source: BP IT&S



Q&A

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